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WESTERN BIRD BANDING ASSOCIATION
76th
ANNUAL MEETING
Stevensville, Montana

Saturday, August 30, 2003

AGENDA

9:45 - 10:00	Introduction Steph Jones
10:00 -10:15	Banding grassland birds: First you have to catch them! Stephanie L. Jones
10:15 -10:45	Eagles in Montana: Where do they come from, where do they go? Al Harmata
10:45 -11:00	Environmental correlates of small owl detection and capture in northern California and southern Oregon: Implications for monitoring. T.M. Rodriguez, R.I. Frey, J.D. Alexander, and C.J. Ralph.

Break 11:00-11:15

11:15 -11:45	Musings on Molt. Peter Pyle
11:45 -12:15	Diurnal Raptor and Nocturnal Owl Banding During Fall Migration Along the Boise Ridge in Southwestern Idaho. Jay D. Carlisle, Greg S. Kaltenecker,, and Sarah L. Stock
12:15 - 1:30	**Lunch, Teller**
1:30 - 2:00	**Posters**
1:30 - 2:00	Band Manager demonstration Mary Gustafson
2:00 - 2:20	News from the BBL. Mary Gustafson
2:20 - 2:40	Loggerhead Shrikes (*Lanius ludovicianus*), Trapping Methods and Results from Eastern Colorado - 1993 to 2003. Susan Craig
2:40 - 3:00	Monitoring on the landscape: the influence of multi-station mist-net captures on avian population estimates. C. John Ralph, Sherri L. Miller, Kimberly Hollinger and John Alexander

Break 3:00 - 3:20

3:20 - 3:40	Age class ratios of landbird species among riparian sites in northern California and southern Oregon. Robert I. Frey. and John D. Alexander.
3:40 - 4:00	Winter Site Fidelity and Body Condition of Birds in Burned Riparian Habitat. Diane Humple
4:00 - 5:00	Membership meeting, Ken Burton (President)

POSTERS:

Fritz Prellwitz Nest Site Fidelity and Preferences for Marbled Godwit (*Limosa fedoa*), Willet (*Catoptrophorus semipalmatus*), and Long-billed Curlew (*Numenius americanus*).

C. John Ralph, Robert I. Frey, Pablo Herrera, and Margaret Widdowson. Integrated Landbird Monitoring at Tortuguero on the Caribbean Coast of Costa Rica.

C. John Ralph, Carol Pearson Ralph, Kim Hollinger, and Bob Frey. The Bander's Merit Badge

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ABSTRACTS

Banding Grassland Birds: First you have to catch them!

Stephanie L. Jones, Fish and Wildlife Service, Denver, CO

Color banding has been an important component of the grassland bird demography project at Bowdoin National Wildlife Refuge. The objective is to determine the degree of annual site fidelity (return rates) over time for Sprague's Pipits, Savannah Sparrows, Grasshopper Sparrows, and Baird's Sparrows, and Chestnut-collared Longspur, five of the principal breeding grassland bird species within the study area. Beginning in June 1998, all known territorial male Baird's Sparrows were targeted and captured using 30 or 36-mm mesh mist nets drawn in by tape playback recordings of conspecific song. Since grassland birds are notorisly hard to capture, I have refined the technices through the years of this study. Annual return rates for adult Baird's Sparrow was 4.08% (n = 98) and 0% for nestlings (n = 85), and 0% for adult (n = 34) and nestlings (n = 132) for Sprague's Pipit. Other species had low sample sizes, and return rates varied. Baird's Sparrow populations can show large yearly fluctuations near the boundaries of their breeding range and this could be an indication of nomadism. This is consistent with the other banding study of Baird's Sparrows in North Dakota and is consistent with the lack of geographic variation in Baird's Sparrow songs, which are widely dispersed across the breeding range.

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EAGLES IN MONTANA: Where do they come from, where do they go?

Al Harmata, Fish & Wildlife Program, Ecology Dept., Montana State Univ., Bozeman, 59717

Bald eagles (BAEA, *Haliaeetus leucocephalus*) and golden eagles (GOEA, *Aquila chrysaetos*) occur year-round in Montana. Number of breeding pairs of BAEAs in Montana grew from 23 in 1980 to 309 in 2003. Approx. 5000 GOEA breeding pairs was estimated for Montana (Phillips 1996) but accurate estimates are unavailable. Since 1972, a variety of auxiliary marking studies of eagles conducted throughout the Rocky Mountains and California addressed various management conflicts and aspects natural history. Nearly 700 BAEAs and 400 GOEAs were banded as nestling, breeding, seasonal migrant or wintering birds up to summer 2003 and several encounters of birds banded by

others were obtained. All groups regardless of banding location exhibited some connection with Montana. A synthesis of several studies help in describing origins and destination of eagles in Montana. Band encounters indicated BAEAs moved farther than GOEAs of respective age and status at banding. Highly productive BAEAs tended to perch closer to nest sites than BAEAs with poor productivity and perch distribution may be associated with habitat quality. Summer resident BAEAs in Montana are composed of resident breeders, their young and supplemented by nonadult eagles from Arizona, California, Colorado, and Texas. Autumn and spring populations BAEAs are composed of locally produced and Canadian migrant adults and immatures but pathways and ultimate destinations differ depending weather and watershed of origin. Winter populations are resident breeders and Canadian birds but age groups are related to severity of winter. GOEAs are primarily resident and may wander regionally but seasonal populations may be composed of birds produced or breeding as far north as Alaska and Northwest Territories. Migration strategies of both species are discussed.

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Environmental correlates of small owl detection and capture in northern California and southern Oregon: Implications for monitoring

T.M. Rodriguez, R.I. Frey, J.D. Alexander, and C.J. Ralph.
Klamath Bird Observatory, P.O. Box 758, Ashland, OR 97520

Because small owls are often sensitive to habitat change, they have the potential to play a role as ecological indicators in western coniferous forests. However, in order for monitoring efforts to be effective, it is important to understand how seasonal patterns and other environmental conditions influence detection and capture rates. Since 2001, the Klamath Demographic Network has been monitoring Flammulated Owls, Northern Saw-whet Owls, Northern Pygmy Owls, and Western Screech Owls in southern Oregon and Northern California. In an effort to compare different techniques, we have implemented both mist-netting and censusing methods. We have compared the results of these two methods and examined environmental factors (e.g., lunar phase and time of night) that may affect the detection and capture of the target species. These results contribute to our understanding of the ecology of these small owls and will facilitate the creation of monitoring protocols that maximize detection and capture rates.

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Musings on Molt

Peter Pyle, PRBO, Stinson Beach, CA

Although molt constitutes one of two or three energy-consuming events of a bird's annual cycle, our understanding of its nuances seems forever to lag well behind that of its metabolic contenders, reproduction and migration. Indeed, the details of molt extent and sequence have yet to be worked out for many common North American species, from loons to vultures to ducks to kingfishers. I will explore recent findings on molt extent and sequence across North American taxa, including those leading to proposed revisions of molt terminology, in birds overall and ducks in particular. Other

topics whose paths we may cross include Staffelmauser, color-deposition strategies, ageing by feather retention patterns and molt limits, and, if time permits, an examination of our fear of molt.

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Diurnal Raptor and Nocturnal Owl Banding During Fall Migration Along the Boise Ridge in Southwestern Idaho

Jay D. Carlisle[1,2,] Greg S. Kaltenecker[1], and Sarah L. Stock[3]

[1]Idaho Bird Observatory, Boise State University, Department of Biology, 1910 University Drive, Boise, ID 83725; [2]University of South Dakota, Department of Biology, 414 E. Clark Street, Vermillion, SD 57069; [3]Big Sur Ornithology Lab, Ventana Wilderness Society, HC 67 Box 99, Monterey, CA 93940

The Idaho Bird Observatory (IBO) has conducted fall migration monitoring in the Boise Foothills since 1993, including ten years of diurnal raptor banding and four years of nocturnal owl banding. We captured diurnal raptors at fixed trapping stations using baited dho-gaza traps, bow nets, and mist-nets from late August through October of 1993-2002. Of 9106 raptors banded (14 species), 52 (0.6%) have been recovered elsewhere. Recovery data have outlined general migration routes and shown that Sharp-shinned and Cooper's Hawks seem to winter in a small area in Sinaloa, Mexico whereas most winter recoveries of Red-tailed Hawks are from California. We monitored nocturnal owl migration using audio-lures and mist-net arrays from late August to late October 1999-2002. We banded over 1250 migrant owls of six species, dominated by Northern Saw-whet Owls and smaller numbers of Flammulated Owls. Here, we present information on trapping methods, migration timing (both seasonal and daily), and age/sex ratios of these two most common species. These banding studies provide valuable information about the migration routes, timing, and ecology of western raptors.

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Loggerhead Shrikes (*Lanius ludovicianus*) Trapping Methods and Results from Eastern Colorado - 1993 to 2003

Susan H. Craig, 1530 Robidoux Circle, Colorado Springs, Colorado 80915

Beginning in 1993, I've captured and banded Loggerhead Shrikes, primarily in El Paso County, east of Colorado Springs, Colorado. Birds are banded, measurements taken of wing, tail and bill, sex and age recorded, then released at site of capture. Subspecific characteristics are noted, and a feather is taken for DNA analysis. Traditional nest sites are monitored but not directly approached. Three or four recaptures per year support findings by previous researchers regarding philopatry by sex (e.g., males exhibit high site fidelity, but females disperse.). Notes are kept on arrival and departure dates, as well as breeding success (average number of young per nest). As an indicator of species viability, I monitor the ratio of young (SY) birds to adults in the spring. Capture method is a very safe, successful trap of my own design and manufacture, which I deploy from the car window alongside quiet country roads in likely habitat.

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Monitoring on the landscape: the influence of multi-station mist-net captures on avian population estimates

C. John Ralph, Sherri L. Miller, Kimberly Hollinger and John Alexander

The primary aims of monitoring birds using constant effort mist netting is to estimate population composition, including species abundances and various demographic parameters, such as survivorship, productivity, and mortality. The number of stations necessary to characterize these parameters for a region or a habitat is central to all the planning and execution of monitoring by this method. We compare, with a dense configuration of stations in Northwestern California and southern Oregon, the effect of some behaviors, such as dispersal, upon the number of individuals, species, and on a demographic parameter, age ratios.

(1) How similar are nearby stations in their species composition and abundances? If nearby stations are very similar, then stations can be located at greater distances to achieve statistical and biological independence.

(2) How much do nearby stations share the same individuals? If the dispersal rate is relatively high, so that nearby stations share a large number of common individuals, then stations can be located farther apart.

(3) Do any stations have consistently lower or higher numbers of young in some species, or with all species combined? That is, were they sources or sinks? If stations were similar to each other in their age ratios, then fewer stations would be needed to be sampled to provide a good estimate of the area being sampled.

(4) How many stations are needed in a region to detect a specified change in a demographic measure, e.g. percent of young?

(5) Stations operate according to available personnel, and in some years daily operations are feasible, in others it might be every third day, or even weekly. How important is it that a station be operated consistently between years during the fall migration, with many transient individuals? That is, how does the number of net hours affect capture rates?

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Age class ratios of landbird species among riparian sites in northern California and southern Oregon

Robert I. Frey and J. D. Alexander. The Klamath Bird Observatory, P.O. Box 758, Ashland, OR

We examined age class ratios of birds captured at 19 sites in riparian habitat of southern Oregon and northern California. Between the third week of May and the first week of July 2003, we used a combination of plumage and molt patterns to assign captures of 6 species as second-year or after second-year age classes. Our ability to age birds varied among species. Of the species for which we were able to age at least 75% of individuals captured, there was evidence that the age ratios differed among species. Such variation may result from differences in life history strategies. Information about local population age structure can indicate habitat quality at various scales, as it relates to productivity. Using plumage and molt patterns may be a useful tool for ecological monitoring and provide valuable information to land managers.

Winter Site Fidelity and Body Condition of Birds in Burned Riparian Habitat

Diana Humple[1], Ivan Samuels[1,2], Tom Gardali[1], and Geoff Geupel[1]
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The ecology of non-breeding songbird species in riparian habitat is not well studied. We compared body condition, overwinter site persistence, and between season site fidelity of three commonly captured songbird species (Fox Sparrow, *Passerella iliaca*; Hermit Thrush, *Catharus guttatus*; and Ruby-crowned Kinglet, *Regulus calendula*) at two coastal riparian sites. Wildfire, which is rare in this habitat, had occurred at one of the sites prior to data collection. Capture rates for all three species showed high inter-annual variation at both sites, with the highest number of new captures at the burned site in the second winter after the fire. A significantly larger proportion of Fox Sparrows was recaptured in subsequent winters at the unburned site than at the burned site, but little difference was found between sites for Hermit Thrush or Ruby-crowned Kinglet. For all three species, the mass of individuals declined from early to late winter at the burned site, but differences between sites were not significant. Similarly, body mass indices of new captures were lower at the burned site than the unburned site for all three species, but these differences were not significant. Overwinter site persistence declined at the burned site over the course of the study, possibly due to changes in vegetation structure caused by the fire. Overall, our data suggest that wintering songbirds were resilient to this disturbance, but that response to the post-fire environment differed among foraging guilds. Well-replicated studies that include pre-burn data are needed to evaluate the effect of this disturbance agent in riparian systems.

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POSTERS

Integrated Landbird Monitoring at Tortuguero on the Caribbean Coast of Costa Rica.

C. John Ralph, Robert I. Frey, Pablo Herrera, and Margaret Widdowson.
Redwood Sciences Laboratory and Klamath Bird Observatory.

Since 1994, the Tortuguero Integrated Bird Monitoring Program has been monitoring birds in the coastal lowland rain forests of northeast Costa Rica. We have established long-term monitoring sites in the lowland tropical rain forest of Tortuguero, Costa Rica to add a scientific base to these problems. This is the longest running constant effort monitoring of the landbirds in Costa Rica. This program has brought together a unique combination of over 100 biologists, students, scientists, and interns that have contributed to education, training, and information exchange. We have used standardized methods of Mist-net arrays, Area Search censuses, and Migration Counts at five primary and two satellite sites, each comprised of 10 – 15 12m net locations, two area search routes, and a migration count point. We will show some results from this monitoring, including huge passages of diurnal migrants, and interesting captures of resident birds.

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THE BANDER'S MERIT BADGE

C. John Ralph, Carol Pearson Ralph, Kim Hollinger, and Bob Frey
Redwood Sciences Laboratory, and Klamath Bird Observatory

We have developed a checklist of knowledge that a trainee needs to become a competent bander, and incorporated it into a useful reference tool for both the trainee and instructor. A primary bander should have all of these 65 skills outlined, and be able to instruct interns and volunteers in the procedures in the checklist. As the trainee completes each of the 65 items, the trainer initials and dates one of the three columns as to if the item has been introduced, instructed, or passed, as follows: (1) Introducing the material involves showing the trainee where the information can be found in the written material. (2) After the trainee has read the material, then the trainer gives preliminary instruction to the trainee in the material. (3) When the trainee feels that he or she has mastered the material, then the trainer reviews it with the trainee. Each section of instructions should take about 5-15 minutes, with a few exceptions.

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